

February 16, 2004

The United States Customs and Border Protection, Department of Homeland Security has requested an opinion from Federal Occupational Health regarding the need for routine vaccination of their inspectors against Hepatitis A virus. The inspectors' work at the Ports of Entry (POE): airports, seaports, land crossings and foreign mail inspections. Their responsibilities include contact with domestic and international travelers and their property including passports, merchandise, luggage, and cars.

Hepatitis A infection is one of the most common causes of acute viral hepatitis; there are about 75,000 to 100,000 cases a year with 100 deaths due to the disease. Although 75% of adults with acute hepatitis A infection are symptomatic, about 70% of children with the infection do not have symptoms. Sero-prevalence rates increase with age, about 11% of children younger than 5 years old, 33% of adults older than 50 years of age and 75% of adults older than 70 years of age have serologic evidence of previous infection. The highest rate of sero-prevalence is among Mexican-Americans, Indians, and Alaskan natives. Racial and ethnic differences probably reflect socioeconomic status and resultant living conditions such as crowding as well as more frequent contact with persons from countries where Hepatitis A is endemic. (South America, Africa, Asia, India).

The main reservoir of the Hepatitis A virus is the human. Because most children do not have symptoms when they are infected with the Hepatitis A virus, children are considered the principle reservoir of infection.

Hepatitis A virus is transmitted from person to person by the fecal-oral route and through the ingestion of contaminated food or drink. Rarely, the virus has been transmitted through transfusion of blood or blood products.

Most cases of Hepatitis A viral infection occur as a result of person-to-person transmission. The most frequent infections occur within the household or through sexual transmission (12%-26%). Approximately 11%-16% of cases occur among children or employees in daycare centers or among their contacts. About 4%-6% of cases occur in international travelers and of those travelers infected, 36% of the infections occur in children with Mexico being the most frequent destination. About 2%-3% of cases occur from food or waterborne outbreaks. About 50% of the cases in the United States do not have a source; this is probably due to an incubation of 28 days (range 15 to 50 days.) Cyclic outbreaks occur every 5-10 years in the United States with about 10,000 cases reported in 2001.

The incidence of Hepatitis A infections has decreased over the past several decades. This is primarily due better hygiene practices and sanitary conditions (improved water supplies, sewage disposal, food sanitation, and less crowded living conditions).

The availability of the Hepatitis A vaccine provides the opportunity to substantially lower the rate of infection in the community. However, universal vaccination against Hepatitis A virus is not currently recommended.



The current recommendations for routine Hepatitis A vaccination include those groups considered by the Advisory Committee on Immunization Practices of the Centers for Disease Control to be at a greater risk of infection. This list includes:

- Groups at increased occupational risk of infection include those working with Hepatitis A infected primates or in a research laboratory setting. Workers in day care settings are not considered to be at greater risk when good hygiene practices are used. Studies conducted on individuals working with raw sewerage do not indicate an increase in infections when appropriate personal protective equipment is used. Health care workers are not at increased risk of infection when universal precautions are utilized. No other groups have been shown to be at increased risk of Hepatitis A viral infection due to occupational exposure.
- Children at least two years of age living in a state or county with a higher rate of infection (Alaska, Arizona, California, Idaho, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Utah, and Washington).
- Travelers at least two years of age to countries with high or intermediate rates of infection.
- Men who have sex with men.
- Illicit drug users
- Persons with clotting factor disorders
- Persons with chronic liver disease

Inspectors for the Customs and Border Protection, Department of Homeland Security are not considered to be at increased risk of occupational exposure to the hepatitis A virus when appropriate protective measures are in place. Therefore, in concert with current published recommendations, Federal Occupational Health does not recommend the routine vaccination of inspectors for the prevention of Hepatitis A virus infection.

Hepatitis A virus infection can be prevented by the use of personal protective equipment and good hygiene practices at all times during contact with the public. This can be achieved by ensuring the availability of gloves and ample areas for hand washing. Eating areas should be separate from work areas. The inspectors should receive training and mandatory periodic re-training in the use of personal protective equipment. This can be reinforced with periodic re-evaluation of the inspector's use of personal protective equipment and providing educational sessions encouraging good hygiene practices at work and home. Gloves should be changed frequently and hands should be washed when gloves are changed. The inspectors should be strongly encouraged to wash their hands prior to smoking, eating and drinking. The training program should include education about immediately reporting to a supervisor any exposure to blood or bodily fluids.



**Federal Occupational Health**  
a component of the US Public Health Service  
Department of Health and Human Services



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